

HEALTH AND LIFESTYLE: A SAUDI PROFILE

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لقد أثبتت الأبحاث العلمية عدداً من الآثار السلبية على الصحة بسبب سلوكيات خاطئة مثل التدخين والقصور في مزاولة الرياضة وعدم التحكم في وزن الجسم وعدم استخدام حزام الأمان . إن النتائج التي تشير إليها الدراسات المتفرقة المتوفرة فيما يتعلق بالعوادات السلوكية الصحية للمجتمع السعودي لا تبدو مشجعة . ولذلك فإذا أريد للمستوى الصحي العام للمجتمع السعودي أن يتحسن ، فإن تعزيز العادات السلوكية الصحية ينبغي أن يعد ضمن المتطلبات الضرورية لذلك .

الكلمات المرجعية : التعزيز الصحي ، العادات السلوكية ، المملكة العربية السعودية.

The negative effects on health by behavior such as cigarette smoking, lack of physical exercise, non-control of body weight and non-use of seat belts were empirically documented. Available findings of the various studies on lifestyle of the Saudi Arabian community were not encouraging. If the general health status of the Saudi population is to be improved, an enforcement of healthy lifestyles must be considered.

Key Words: Health promotion, Lifestyle, Kingdom of Saudi Arabia..

“Prevention is better than cure” is an often-quoted axiom. Recently, there was significant development with the enforcement of prevention as a means of avoiding disease and a movement towards positive health. The behaviour of the individuals is intimately related to their health status. This relationship will be scientifically discussed in this paper.

CIGARETTE SMOKING

In the USA, where more than one quarter of all adults smoke cigarettes,¹ tobacco smoking is considered the leading

preventable cause of disease, disability and premature death.^{2,3} It has been estimated that direct and indirect economic losses attributed to tobacco use in USA approach 85 billion US Dollars annually.² The risk of premature death in smokers was about double that of non-smokers and was directly proportional to the frequency of smoking.^{2,4} Recent data showed that 15% of all cancer cases in the world were estimated to be due to cigarette smoking.⁵ Moreover, slightly less than 20% of all deaths in industrialized countries were attributable to tobacco.^{6,7}

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Tobacco contains about 4000 substances, more than 40 of which are carcinogenic and many others that are hazardous to cardiopulmonary systems.² Many studies have demonstrated an association between cigarette smoking and cancers of the oral cavity, pharynx, larynx, lungs, esophagus, stomach, colon, rectum, pancreas, kidney and urinary bladder,^{3,5,8-11} and a less strong association with leukemia and cervical cancer.⁸ A causal association was found to exist between smoking and coronary artery disease, peptic ulcer, chronic obstructive pulmonary disease and stroke.^{3,10,12,13}

Cigarette smoking is not only harmful to those using it deliberately, but also to involuntary smokers (the so-called "passive smokers"). Passive smoking is associated with coronary artery disease, chronic obstructive pulmonary disease, asthma, leukemia and cancers of the lung, sinuses, cervix, breast and brain.^{1,2,14-16} In children, passive smoking is associated with higher incidence of asthma attacks, pneumonia, ear disease, sudden infant death syndrome and upper and lower respiratory tract infections.^{1,2,14,17} Fetuses are not exempted from hazards of smoking. It was found that pregnant mothers exposed to passive smoking were more prone to have low birth weight infants.¹⁸

It is doubtful that an ex-smoker will fully resume his pre-smoking health state. However, a substantial risk reduction with great improvement in life expectancy and quality is beyond doubt.^{2,11,19-23} The benefit of quitting is documented even for old patients and those with an established tobacco-related disease.²³⁻²⁵

LACK OF PHYSICAL EXERCISE

More than half of Americans are considered to have a sedentary life-style.³ This is considered the most preventable risk factor for coronary artery disease.^{3,21,26}

Regular physical exercise decreases the risk for many health problems including non-insulin dependent diabetes mellitus, osteoporosis, osteoarthritis, cardiovascular disease, cancer, hypertension, obesity and hypercholesterolemia.^{3,27-34} Regular exercise was also found to be associated with better general well-being³⁵ and life expectancy^{36,37} in addition to lesser mortality rates.^{4,22}

Specific prescription of physical exercise should be given to almost all patients, bearing in mind the age and general condition of each individual.^{3,23} Almost every patient including elderly people and those with severe coronary artery disease and patients with congestive heart failure, has the potential of benefiting from regular physical exercise.^{3,24,25,37}

The physiologic effects of exercise depend on its type, intensity, duration and frequency.³⁸ Recreational physical exercise can be classified into the following two types:^{38,39}

1. Isometric (static or anaerobic) exercise:

This type is characterized by an increase in muscle tension without much change in fiber length, with substantial energy expenditure. Examples are weight lifting, hand grip exercises and pushing or pulling against a resistance. Anaerobic exercise increases total peripheral resistance and thus leads to considerable rise in blood pressure. Therefore, this type of exercise is not suitable for patients with cardiovascular disease. It is, however, suitable for athletes to build up bulk muscle.

2. Isotonic (dynamic or aerobic) exercise:

Aerobic exercise is characterized by shortening of muscle fibers with little

increase in tension. Examples are swimming, bicycling and running. In aerobic exercise, total peripheral resistance decreases but heart rate and cardiac output increase. This is the type of exercise which is recommended to the general population on a regular basis. The more frequent and prolonged the aerobic exercise, the better its effects, provided that the patient's condition permits it.^{33,40}

NON-CONTROL OF BODY WEIGHT

The annual economic losses due to obesity are calculated in billions of dollars.⁴¹ The prevalence of obesity in UK (1986) approached 12% in males and 8% in females.⁴² The situation in USA is even worse, where about one quarter of all adult Americans are overweight.^{42,43} Furthermore, recent data indicated a linear increase in the average weight of American adults over the last few decades.⁴¹

Obesity is defined by WHO as a body mass index (BMI) more than 30 kg per square metre.^{42,44} The risk of overweight-related problems, however, starts at body mass index of 25 kg per square metre.⁴¹ Overweight adversely affects the general health of people.³⁵ It is considered to be a risk factor for non insulin dependent diabetes mellitus, coronary artery disease, hypertension, hyperlipidemia, gallstones, low back pain, certain cancers (colorectal and prostate in males, and cervical, breast and ovarian in females) and premature death.^{4,26,43-48}

Distribution of regional, rather than total, body fat is increasingly gaining special importance. Recent research has demonstrated an association between the amount of visceral fat and the disturbances in glucose tolerance and lipid concentrations.⁴⁶ Visceral fat, which can be measured by computerized tomography,⁴⁶ was found to correlate highly significantly with waist-to-hip

ratio.⁴⁹ Cut off points for waist-to-hip ratio, above which high risk begins, were generally agreed to be 0.95 for men and 0.80 for women.⁵⁰ High waist-to-hip ratio (upper body obesity) is associated with high risk for hypertension, diabetes mellitus, hypercholesterolemia, hypertriglyceridemia, low HDL, hyperinsulinemia and mortality from cardiovascular disease.^{44,46,50-54}

Causes of obesity include a variety of medical, genetic and lifestyle factors. The easiest and most effective modality of prevention is to deal with the lifestyle factors, namely diet and physical activity.^{42,55} Prevention of obesity has been proved to be highly beneficial in preventing obesity-related health hazards, resulting in a better life expectancy and general health.^{11,20-23,32,56-58}

NON-USE OF SEAT BELTS

Seat belts were introduced for the first time in the mid 1950s. By the late 1960s, seat belts were required in all new cars in USA. The introduction of interlock devices that prevent ignition if the driver's safety belt was not fastened, resulted in a significant improvement in the use of seat belts. Unfortunately, these devices were met with strong opposition by the public. Minimal improvement occurred with the introduction of warning lights and buzzers. In the USA (1984), legislation for the use of seat belts took place and resulted in increased compliance from 15% to about 50% in a short time.⁵⁹

Studies from all over the world documented the benefits of seat belts and the hazards of non-use.^{11,27,35,60-65} There was more than 60% reduction in the severity of injuries, hospital admissions and hospital charges for users of seat belts.⁶⁶ In Germany, morbidity and mortality due to road traffic accidents have shown substantial decrease when the rates of seat belts use increased.⁶⁷ Interestingly it was

found that parents' use of seat belts, influenced children to do the same⁶⁸ and that non-use of seat belts was associated with other unhealthy behavior such as smoking, overweight and lack of exercise.^{62,69}

The airbag was recently introduced in many new motor vehicles as a supplement to seat belts. This new device has proved quite effective but its effect is still limited due to the relatively small number of cars equipped with them.⁷⁰

THE SITUATION IN SAUDI ARABIA

There is a belief that during the last few decades some unhealthy lifestyles have been adopted by Saudis. However, published national studies that quantify these important assumptions are few.⁷¹ Most of the studies referred to below are apparently limited by being either retrospective, based on insufficient recording systems, clinic-based, hospital-based, or done on a small scale. These limitations do not rule out the importance of such studies in providing us with rough estimates of the extent of the problem in our country.

Available data point to cigarette smoking as an important health problem in Saudi Arabia.⁷² Following the steady increase in the quantity of tobacco imported before 1987, national statistical data^{73,74} showed significant reduction in tobacco imports during the period from 1989 to 1994 (Table 1). Tobacco, however, is still considered a burden on the health and economy of Saudi population. It was found that 33% of male medical students in Riyadh smoke cigarettes.⁷⁵ The prevalence among other University students was even higher (37%).⁷⁶ In secondary schools, 22% of male students admitted being regular smokers.⁷⁷ While smoking is considered socially unacceptable among females, up to

12% of university female students reported being current smokers.⁷⁸

In 1987, Al-Turki found that the smoking rate in the Eastern Province was 37% and 9% for adult males and females.⁷⁹ In Al-Baha Province, in 1989, Al-Bedah reported a higher rate among males; about 53% of adult males being smokers. The overall rate, however, was 29% because cigarette smoking was absolutely unacceptable among females in such a rural community.⁸⁰

Table 1: The weight (in thousand tons) and cost (in million SR) of tobacco imported during the period 1989-1994

Year	Weight	Cost
1989	37	943
1990	37	1039
1991	37	1296
1992	21	374
1993	12	214
1994	9	401

Table 2: The per capita daily dietary consumption (Kcal/day) of Saudis over the period 1974-1989

Period	Per capita consumption (Kcal/day)
1974-1976	1807
1977-1979	2399
1980-1982	2867
1983-1986	3012
1987-1989	3064

Over the past two decades, the per capita calory consumption of Saudis has shown a steady increase (Table 2).^{81,82} Considering BMI of 25 as a cut-off point, Binhemd et al⁸³ found 52% of males and 65% of females visiting the primary care clinic of King Fahd Hospital of the University at Al-Khobar, to be obese. Despite the limitation of such a study, the high figures it showed were supported by findings of Al-Shammari et al.⁴⁷ Al-Abbad

(1995) demonstrated a prevalence of obesity (defined as a BMI of ≥ 85 th percentile) approaching 29% among female students aged 11-21 years.⁸⁴

Data about recreational aerobic physical activity of Saudis are not yet available. However, if we consider the body weight as an indirect indicator, the physical activity of Saudi population does not seem to be improving in relation to other healthy life styles.

The number of cars imported by Gulf countries increased by 1031% between 1971 and 1984, and deaths due to road traffic accidents increased by 307% in the same period. In Saudi Arabia, the number of cars increased by 2400% within the 10 years ending 1986 and this was associated with 469% increase in trauma cases and a 561% increase in related deaths.⁸⁵

It is not surprising, therefore, that road traffic accidents constitute the leading cause of death in the age group 16-36 years. In 1984, mortality due to road traffic accidents approached 15 deaths per day. This number reflects only those who died at the scene of the accident. Those who died en route to the hospital or following admission were almost double.⁸⁶ In 1980, Khawashki estimated the economic loss in Saudi Arabia due to road traffic accidents as Saudi Riyals 4,776,836 per day.⁸⁷ In Asir region alone, which contains 2.5% of all cars in the country, about 7760 persons were involved in road traffic accidents in the period from 1989-1991; 62% of these were injured, and 12% died.⁸⁸

Fast driving, driving by children under 18 years of age and driving without a licence were found to contribute enormously towards road traffic accidents.⁸⁸⁻⁹⁰ The authorities have responded to this by taking different measures including the imposition of

severe penalties to offenders. Surprisingly, the mandatory use of seat belts which is probably easier to enforce, is still receiving little attention. In a study done by Marwa et al,⁹¹ none of the victims of road traffic accidents were found to have had the seat belts fastened. A few small studies attempted to measure the rate of seat belts use in certain localities in the country and ended up with the rates ranging from 7-19%.^{90,92,93} Unfortunately, to the best of the author's knowledge, there have been no nation-wide studies on the rate of seat-belt use.

There is an obvious paucity of research about the lifestyle of Saudi population. However, the data in hand do not call for optimism. Indeed, there is a great need to enforce healthy behavior in the Saudi community as means of promoting healthy lifestyle towards the eventual goal of positive health.

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